

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (Previously Presented) An exhaust purifying apparatus for an internal combustion engine, wherein the apparatus estimates an accumulation amount of particulate matter trapped about a catalyst in an exhaust system, and wherein, when the estimated accumulation amount is equal to or more than a permissible value, the apparatus executes PM elimination control for supplying unburned fuel component to the catalyst to increase the temperature of the catalyst and burning the trapped particulate matter, and sets the estimated accumulation amount to zero at the completion of the PM elimination control, and

when execution of the PM elimination control becomes possible after suspension of the control, the apparatus resumes the PM elimination control even if the accumulation amount of particulate matter about the catalyst is less than the permissible value,

at a final stage of the PM elimination control, that is, when the estimated accumulation amount is less than a determination value that is slightly more than zero, the apparatus executes burn-up control, in which performance and stopping of concentrated intermittent fuel addition to a section of the exhaust system that is upstream of the catalyst are repeated a predetermined number of times, and

the intermittent fuel addition increases a catalyst temperature in order to burn up particulate matter that is deposited at an upstream end of a particulate filter.

2. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein, when resuming the PM elimination control, the smaller the accumulation amount, the shorter the time for execution of the PM elimination control is set by the apparatus.

3.-4. (Canceled)

5. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein the apparatus discretely increases the temperature of the catalyst after resuming the PM elimination control.

6. (Previously Presented) The exhaust purifying apparatus according to claim 5, wherein the apparatus:

burns unburned fuel collected on the catalyst in an early stage of the increase in the catalyst temperature; and

further increasing the catalyst temperature thereafter, thereby burning particulate matter collected on the catalyst.

7. (Previously Presented) An exhaust purifying method for an internal combustion engine, the method comprising:

estimating an accumulation amount of particulate matter trapped about a catalyst in an exhaust system of the internal combustion engine;

executing PM elimination control when the estimated accumulation amount is equal to or more than a permissible value, in which control, unburned fuel component is supplied to the catalyst to increase the temperature of the catalyst and the trapped particulate matter is burned;

setting the estimated accumulation amount to zero at the completion of the PM elimination control; and

resuming the PM elimination control when execution of the PM elimination control becomes possible after suspension of the control, even if the accumulation amount of particulate matter about the catalyst is less than the permissible value.,

at a final stage of the PM elimination control, that is, when the estimated accumulation amount is less than a determination value that is slightly more than zero, executing burn-up control, in which performance and stopping of concentrated intermittent fuel addition to a section of the exhaust system that is upstream of the catalyst are repeated a predetermined number of times, and

the intermittent fuel addition increases a catalyst temperature in order to burn up particulate matter that is deposited at an upstream end of a particulate filter.

8. (Previously Presented) The method according to claim 7, wherein, when the PM elimination control is resumed, the smaller the accumulation amount, the shorter the time for execution of the PM elimination control is set.

9. (Canceled)

10. (Previously Presented) The method according to claim 7, wherein the temperature of the catalyst is discretely increased after the PM elimination control is resumed.

11. (Currently Amended) An exhaust purifying apparatus for an internal combustion engine, comprising:

an estimation unit that estimates an accumulation amount of particulate matter trapped about a catalyst in an exhaust system, and

a control unit, when the estimated accumulation amount is equal to or more than a permissible value, the control unit executes PM elimination control for supplying unburned fuel component to the catalyst to increase the temperature of the catalyst and burning the trapped particulate matter, and sets the estimated accumulation amount to zero at the completion of the PM elimination control,

when execution of the PM elimination control becomes possible after suspension of the control, the control unit resumes the PM elimination control even if the accumulation amount of particulate matter about the catalyst is less than the permissible value,

at a final stage of the PM elimination control, that is, when the estimated accumulation amount is less than a determination value that is slightly more than zero, the control unit executes burn-up control, in which performance and stopping of concentrated intermittent fuel addition to a section of the exhaust system that is upstream of the catalyst are repeated a predetermined number of times, and

the intermittent fuel addition increases a catalyst temperature in order to burn up particulate matter that is deposited at an upstream end of a particulate filter.

12. (New) The exhaust purifying apparatus according to claim 1, wherein, concentrated intermittent fuel addition is repeatedly performed and stopped in the burn-up control.

13. (New) The exhaust purifying method according to claim 7, wherein, concentrated intermittent fuel addition is repeatedly performed and stopped in the burn-up control.
14. (New) The exhaust purifying apparatus according to claim 11, wherein, concentrated intermittent fuel addition is repeatedly performed and stopped in the burn-up control.